

## **Frequently Asked Questions (FAQ)**

### **PSD and Title V Greenhouse Gas (GHG) Tailoring Rule**

This document is intended to answer common questions the DNR has received regarding implementation of EPA's GHG Tailoring Rule. It does not address all requirements of the Tailoring Rule. The final authority for requirements is the rule itself - <http://www.epa.gov/NSR/actions.html#may10>.

#### **Applicability**

**1. What are the six greenhouse gases (GHG) covered by the Tailoring Rule?**

The rule defines "greenhouse gases" as the aggregate group of six greenhouse gases – carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

**2. What types of source categories will be affected by the Tailoring Rule?**

DNR estimates that ethanol plants, large landfills, and carbon-intensive sources such as hospitals, food processors, and seed processors may become newly subject to Title V permitting because of their GHG emissions. Affected facilities may also be able to obtain synthetic minor permit limits to reduce their GHG potential to emit so they are not subject to Title V permitting.

These same source categories, plus large sources of industrial GHG emissions (lime, cement, nitric acid, ammonia, iron and steel producers, etc.), may also be subject to Prevention of Significant Deterioration (PSD) permitting for GHGs.

**3. How do I determine if my facility will be subject to Title V or PSD permitting requirements as a result of the Tailoring Rule?**

First, it should be noted that without the Tailoring Rule, thousands of additional facilities in Iowa would become subject to the Title V and PSD permitting programs because the applicability thresholds for GHGs would otherwise be 100 and 250 tons per year based on current federal regulations. However, as a result of the Tailoring Rule, the definition of major stationary source under the Title V and PSD permitting programs will be revised to 100,000 tons per year or more of total GHGs (on a carbon dioxide equivalent (CO<sub>2</sub>e) basis). Also, the PSD Significance Level will be defined as 75,000 tons per year or more of total GHGs (on a CO<sub>2</sub>e basis).

Secondly, the only conclusive method to determine if your facility is affected by this rule is to calculate your GHG potential to emit. For purposes of estimating your GHG potential to emit from fossil fuel combustion, you can use as a rule-of-thumb the total maximum rated capacity of the fossil fuel-fired combustion units at a facility per the table on the next page:

Fuel	Total maximum rated capacity equivalent to a potential to emit of <sup>1</sup> :	
	75,000 tpy CO <sub>2</sub> e <sup>2</sup> (PSD Significance Level)	100,000 tpy CO <sub>2</sub> e (Title V/PSD Major Source Level)
Natural Gas	144 MMBtu/hr or 1,215 MMcf/year	192 MMBtu/hr or 1,620 MMcf/yr
Diesel	102 MMBtu/hr or 6.5 million gallons/year	136 MMBtu/hr or 8.6 million gallons/year
Bituminous coal	81 MMBtu/hr or 709,560 MMBtu/year	108 MMBtu/hr or 946,080 MMBtu/year

#### Examples:

- If a facility has a total capacity to burn 200 MMBtu/hr of natural gas (or 1,700 MMcf/yr), then it will be considered a major stationary source under the Title V and PSD permitting programs because its potential to emit GHGs is greater than 100,000 tpy CO<sub>2</sub>e.
- If an existing facility currently has the capacity to burn 9 million gallons of diesel per year and it is planning an expansion project that will add another 7 million gallons per year of capacity to burn diesel, it will be required to undergo PSD review for GHGs (as required by the phased-in schedule indicated in the Title V and PSD specific questions below) because the new project will be greater than 75,000 tpy CO<sub>2</sub>e.

In addition to the information above, the DNR is working to update its GHG calculation guidance. There are limited emission factors in AP-42 and WebFIRE, but the federal Mandatory Reporting Rule (<http://www.epa.gov/climatechange/emissions/downloads09/GHG-MRR-FinalRule.pdf>) contains fossil fuel emission factors in Table C-1 & C-2, as well as methods for several other source categories. Fermentation emissions can be calculated using mass balance or stoichiometric equations, and landfills should use EPA's LandGEM model at <http://www.epa.gov/ttn/chief/efpac/esttools.html>.

#### 4. Does DNR have an estimate of the number of or type of affected livestock facilities in Iowa that will be affected by the Tailoring Rule?

Not at this time. While the Tailoring Rule does not exempt livestock facilities, the FY 2010 Interior and Environment Appropriations Bill, which funds EPA, contains language limiting EPA's authority over GHGs from livestock operations – specifically with regard to Title V permits and mandatory reporting. Section 424 of the Bill bars the use of any funds appropriated under the Clean Air Act being used by EPA to promulgate or implement any regulation requiring the issuance of a Title V permit to a livestock operation for GHGs, and Section 425 of the Bill bars the use of any funds for mandatory reporting. DNR will update this FAQ with any estimates that become available from EPA. For additional information regarding estimates on the number of livestock head needed to meet certain GHG threshold levels, see Table JJ-1 in EPA's proposed GHG Mandatory Reporting Rules (April 10, 2009).

<sup>1</sup> Note – the thresholds provided above for each fossil fuel are only estimates and should not be used solely to determine if your facility is considered a major source of GHGs for the Title V and PSD programs.

<sup>2</sup> tpy CO<sub>2</sub>e = tons per year carbon dioxide equivalent

**5. To calculate potential to emit from building heating equipment, how much do we assume they will operate? Do we assume they will run 6 months per year or 12 months per year?**

The Tailoring Rule does not change the definition of “potential to emit” in 567 IAC 22.100. Therefore, unless there is a federally enforceable limit restricting the equipment’s operation, potential emissions should be calculated using 8,760 hours of operation annually. Federally enforceable limits are those found in permits and sometimes rule. *Note: There are special provisions in the definition of “potential to emit” for calculating potential to emit for emergency generators and grain elevators.*

**6. Are emissions from biomass combustion or biomass fermentation included in determining the potential to emit for GHGs?** All emissions of air pollutants subject to regulation at a facility should be considered when determining if a facility is a major source for Title V and PSD per 567 IAC 22.100 and 567 IAC 33.3(1). However, on January 12, 2010 EPA announced that they plan to complete a rulemaking by July 2011 that will defer permitting requirements for carbon dioxide emissions from biomass-fired and other biogenic sources for three years. During the deferral period EPA will further consider how to treat these emissions in GHG permitting. A second rulemaking will be issued before the end of the deferral period, finalizing how these emissions should be addressed in GHG permitting. EPA also pledged to issue guidance shortly that will provide a basis that air permitting agencies may use to conclude that the use of biomass as fuel is the best available control technology (BACT) for GHG emissions until EPA can complete the rulemaking granting the three-year deferral.

**7. How does the Tailoring Rule relate to the Reciprocating Internal Combustion Engines (RICE) Rule?**

The two rules may affect the same equipment, but are separate rules. The Tailoring Rule addresses GHGs from stationary sources under Clean Air Act permitting programs, while the RICE rule regulates Hazardous Air Pollutants (HAPs).

**8. Do stand-by generators count for Tailoring Rule applicability since they are exempt under the federal GHG Mandatory Reporting Rule?**

All emissions of air pollutants subject to regulation at a facility should be considered when determining if a facility is a major source for Title V and PSD per 567 IAC 22.100 and 567 IAC 33.3(1).

**9. Should fugitive GHG emissions be included in determining the potential to emit for GHGs?**

When determining Title V applicability, fugitive GHG emissions should only be included in determining potential to emit if the source belongs to one of the categories listed in the definition of “stationary source categories” in 567 IAC 22.100. For PSD purposes, fugitive emissions should not be included in determining potential to emit unless the source belongs to one of the source categories listed under the definition of “major stationary source” under 567 IAC 33.3(1).

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Below are a few general permitting scenarios and questions regarding how the Tailoring Rule will be implemented under the Title V and PSD programs. The Tailoring Rules revises the definition of major stationary source under both programs, and as such, will trigger certain permitting requirements. In general, the major source threshold for GHGs under the Title V and PSD programs will be 100,000 tons per year or more CO<sub>2</sub>e, and the PSD significance level will be 75,000 tons per year or more CO<sub>2</sub>e.

## **Title V**

### **1. Permitting Scenarios:**

#### **a. What are the Title V permitting requirements for a facility that is currently a minor source, but has a potential to emit greater than 100,000 tons per year CO<sub>2</sub>e?**

The facility will become subject to Title V on July 1, 2011. The facility must submit a complete Title V application to DNR within one year (July 1, 2012); or apply for and receive construction permits with sufficient limits to reduce their potential to emit below 100,000 tons per year CO<sub>2</sub>e. Facilities seeking synthetic minor permit limits should contact the Iowa air construction permitting hotline at 1-866-AIR-IOWA (1-877-247-4692) to discuss the timeline for permit application and issuance. At this time DNR recommends that any applications for synthetic permit limits to avoid the Tailoring Rule be submitted by May 1, 2011 to allow DNR enough time to review the applications and issue the permits by July 1, 2011.

Facilities subject to the Title V Operating Permit program are required to submit annual emission inventories and pay annual emissions fees for pollutants other than GHGs per 567 IAC 22.106. The issued Title V permit will also include additional requirements such as:

- Annual compliance certification
- Semi-annual monitoring reports
- Permit renewal every 5 years
- Possible additional periodic monitoring such as testing and recordkeeping
- Responsibility to apply for a modification if construction permits are modified or other changes are made during the permit term

More information on the Title V Operating Permit program is available at <http://www.iowadnr.gov/air/prof/oper/oper.html>.

#### **b. What are the Title V permitting requirements for a facility with a potential to emit of more than 100,000 tons per year CO<sub>2</sub>e that has an existing Title V permit?**

- If the facility does not make a modification that triggers a PSD review for GHGs during the term of the Title V permit, GHGs do not need to be addressed until the renewal application is submitted. DNR will create a new application form or modify an existing form to allow for GHGs to be addressed.
- If the facility makes a modification that triggers PSD, such as adding new fossil fuel-fired boilers with potential emissions greater than 75,000 tons per year CO<sub>2</sub>e, the Title V permit may need to be revised to include any GHG limits if there are three years or more left in the permit term.

**c. What are the Title V permitting requirements for a facility that is currently a minor source but has an existing Title V permit for specific emission unit(s) as is required by a New Source Performance Standard (NSPS) or National Emission Standard for Hazardous Air Pollutant (NESHAP)?**

- If the facility's GHG potential to emit is < 100,000 tpy CO<sub>2</sub>e, no action is needed.
- If the facility's GHG potential to emit is ≥ 100,000 tpy CO<sub>2</sub>e, the entire facility will become subject to Title V permitting requirements on July 1, 2011. The facility must submit an application for a significant modification to their Title V permit to include all emission units at the facility. This application is due within three months after July 1, 2011 per 567 IAC 22.105(1)“a”(8).

**2. Will emission units that are currently considered insignificant activities still qualify as insignificant activities after the Tailoring Rule is adopted?**

There are currently no applicable GHG emission thresholds for insignificant activities in the Iowa Administrative Code; therefore emission units that currently meet the criteria established in 567 IAC 22.103 will remain insignificant activities after adoption of the federal GHG Tailoring Rule. It should be noted that for purposes of determining applicability to the Title V operating permit program, emissions from all sources are counted, including GHG emissions, after GHGs become subject to regulation per the Tailoring Rule.

**3. Subrule 567 IAC 22.103(a) says any emission unit with a potential to emit less than 5 tons per year of any regulated air pollutant can be considered an insignificant activity. Does this mean every unit with a potential to emit over 5 tons per year CO<sub>2</sub>e GHG must be considered “significant” and be included in the Title V permit?**

The “less than 5 tons per year of any regulated air pollutant” threshold in 567 IAC 22.103(2) does not apply to GHGs because they are not included in the definition of “regulated air pollutant” in 567 IAC 22.100. After the Tailoring Rule is adopted into the Iowa Code, GHGs will be “subject to regulation”, but the definition of “regulated air pollutant” will not be modified under this rulemaking.

**4. For a facility that has existing production or emission limits in construction permits, but becomes newly subject to Title V because of GHGs, should the facility request modifications to remove the limits?**

The facility should consider any additional regulations that may be triggered if emission limits or operating limits are removed. Please call the DNR air construction permit hotline at 1-877-AIR-IOWA (1-877-247-4692) for assistance in determining the possible implications of removing requirements such as this.

## **Prevention of Significant Deterioration (PSD)**

**1. Permitting scenarios:**

**a. What are the PSD permitting requirements for an existing facility that has a project during Step 1 (January 2, 2011 – June 30, 2011) that requires Best Available Control Technology (BACT) for a pollutant other than GHGs (such as PM<sub>10</sub>)?**

- If the project also has a net increase of ≥75,000 tpy CO<sub>2</sub>e, BACT is required for GHG.
- If the project has a net increase <75,000 tpy CO<sub>2</sub>e, BACT is not required for GHG.

- b. **What are the PSD permitting requirements for an existing facility that has a project during Step 1 (January 2, 2011 – June 30, 2011) that has a net increase of  $\geq 75,000$  tpy CO<sub>2</sub>e GHG, but does not have an increase for any other pollutant?**

PSD permitting does not apply.

- c. **What are the PSD permitting requirements for an existing facility that has an application for a construction permit project during Step 2 (July 1, 2011 – June 30, 2013)?**

PSD permitting is triggered for:

- A newly constructed source with a PTE of  $\geq 100,000$  tpy CO<sub>2</sub>e (even if it is not major for another pollutant).
- A modification at an existing major stationary source if it has a net increase of  $\geq 75,000$  tons per year CO<sub>2</sub>e, even if it doesn't have a net increase of another pollutant.

**2. What are some examples of Best Available Control Technology (BACT) for GHG?**

In November 2010 EPA released several resources regarding GHG permitting and BACT. These resources include:

- *PSD and Title V Permitting Guidance for Greenhouse Gases* - provides basic information that permit writers and applicants need to address GHG emissions in permits.
- GHG Control Measures White Papers - summarize available information on control techniques and measures to reduce GHG emissions from electric generating units, large industrial/commercial/institutional boilers, pulp and paper, cement, iron and steel, refineries, and nitric acid plants. These papers include basic technical information which may be useful in performing BACT analysis, but they do not define BACT.
- GHG Mitigation Strategies Database – includes specific performance and cost data on current and developing GHG control measures and their potential environmental impacts.
- Enhancements to the Control Technology Clearinghouse (also known as the RACT/BACT/LAER Clearinghouse) - provides access to information and decisions about pollution control measures required by air pollution emission permits issued for GHGs by air permitting agencies.

All of these resources can be accessed on EPA's New Source Review (NSR) website at <http://www.epa.gov/nsr/ghgpermitting.html>. DNR will continue to update its stakeholders as additional BACT information from EPA becomes available.

**3. If a facility triggers PSD for GHGs, will it be subject to PSD for all pollutants? If yes, then would the facility be required to perform PSD increment modeling and BACT for criteria pollutants?**

Only those pollutants that result in a significant net emissions increase are required to perform a full PSD analysis (i.e. BACT, dispersion modeling analysis, soils & vegetation analysis, visibility analysis, and growth analysis). In addition, an increment analysis is only required if the project has a significant impact for modeling. For instance:

- A facility is a major source for PSD. It plans to expand. The proposed project will have a significant net emissions increase of 80,000 tons per year CO<sub>2</sub>e and 150 tons per year of SO<sub>2</sub>. All other pollutants are less than the respective significant net emissions increase levels. Therefore, only GHGs and SO<sub>2</sub> are required to go through a BACT review and additional impacts analysis (soils and vegetation,

growth, and visibility). In addition, SO<sub>2</sub> is required to go through an ambient air assessment which could include increment modeling.

**4. Could a facility be subject to Title V because of their GHG emissions, but not be subject to PSD?**

An existing facility could be a major source for Title V and PSD, but would not trigger a PSD/BACT review until the facility makes a modification with a net increase in emissions. For instance, an existing facility with a PTE  $\geq 100,000$  tpy CO<sub>2</sub>e would be a major source for Title V and PSD, but would not trigger a PSD/BACT review until:

- During Step 1 (January 2, 2011 – June 30, 2011), they had a modification with a significant increase of another non-GHG pollutant and a net increase in GHG emissions of  $\geq 75,000$  tpy CO<sub>2</sub>e.
- During Step 2 (July 1, 2011 – June 30, 2013), they were a Step 1 source or had a net increase in GHG emissions of  $\geq 75,000$  tpy CO<sub>2</sub>e.

**5. What about PSD applicability for Routine Maintenance, Repair, and Replacement (RMRR) items that were considered routine under Title V?**

RMRR has not changed under the PSD program. Currently the DNR reviews every RMRR situation on a case-by-case basis. If a facility has a RMRR situation the facility should review the DNR's RMRR guidance at <http://www.iowadnr.gov/air/prof/const/const.html> and submit the answers to the questions in that guidance document to the DNR for a determination as to whether or not it meets RMRR. If the project is considered RMRR by the DNR, then by definition it is not considered a major modification and would not trigger a PSD review.

## **General**

**1. How does the DNR rulemaking compare to the federal Tailoring Rule?**

DNR's rulemaking amended the state's Title V and PSD air quality rules for GHG emission regulation so that the state rules match the federal Tailoring Rule.

**2. Did the rulemaking change the definition of "regulated air pollutant" in the Title V rules?**

No. The DNR rulemaking matches the federal rulemaking, which does not change the definition of "regulated air pollutant" in Part 70. GHGs are considered pollutants "subject to regulation."

**3. Are there any legal challenges, rules, or new legislation that could delay implementation of the Tailoring Rule?**

Several lawsuits and challenges have been filed to overturn the Endangerment Finding, Light-Duty Vehicle standards, and Tailoring Rule. Several bills introduced in Congress also propose to limit EPA's ability to regulate GHGs. However, unless the Courts issue a stay, or a bill limiting EPA's authority to regulate GHGs is passed and signed by the President, DNR's implementation of the Tailoring Rule will proceed as planned.

**4. When will DNR update its permit application forms?**

DNR will discuss updates to its Title V and construction permit application forms at the February 17, 2011 Air Quality Client Contact meeting. An agenda will be posted prior to the meeting at

<http://www.iowadnr.gov/air/prof/progdev/aqccm.html>. DNR plans to have the final forms completed by April 2011.

**5. What is the formal process and timeline for addressing Title V fees for GHGs?**

The DNR will continue to work with stakeholders to look for appropriate mechanisms to fund Air Quality Program activities. DNR anticipates discussing and receiving input on this issue during Air Quality Client Contact meetings, during the development of a new Title V fee cap rule in the fall, and during Title V budget discussions early in 2011.

**6. Will DNR notify facilities that may be covered by the Tailoring Rule?**

It is ultimately each owner/operator's responsibility to comply with applicable regulations. However, DNR maintains a working list of facilities that it is aware of that may become newly subject to Title V because of GHG emissions (e.g. based on data from previous GHG reporting requirements or fossil fuel combustion capacity) and has notified those facilities in writing. To date, DNR has sent multiple updates regarding the Tailoring Rule via its list serve, hosted a webinar, and worked with several industry associations to make sure affected facilities are aware of the new requirements. Because not all facilities have been required to submit emissions inventories, the DNR does not have a complete list of potential affected facilities.

**7. Are facilities subject to the federal GHG Mandatory Reporting Rule (MRR) also required to report their GHG emissions to DNR?**

DNR is working with EPA to obtain the data collected from the MRR and is not planning at this time to require duplicate reporting to the DNR for year 2010 emissions. DNR is evaluating the reporting implications after GHGs become subject to regulation under the Title V program on July 1, 2011.

**8. How are Local Air Quality Programs (Linn and Polk counties) handling the Tailoring Rule?**

Because the Tailoring Rule is a revision to existing Title V and PSD federal regulations, all facilities in Iowa, including those located in Linn or Polk counties must comply with revised permitting requirements. Since the Title V and PSD programs are delegated to the DNR, local air quality programs may only be required to adopt minor revisions to their county rules.

**Questions and Comments**

If you have a question that you would like addressed in this document, please submit it to Marnie Stein at [marnie.stein@dnr.iowa.gov](mailto:marnie.stein@dnr.iowa.gov) or 515-281-8468.